

1. A method comprising:

asserting a polite request signal that requests that a first transceiver relinquish transmitting via a shared-communications channel, wherein said first transceiver communicates in accordance with a first communications protocol;

indicating via said shared-communications channel that a second transceiver hold subsequent transmissions to said first transceiver;

asserting a first signal that indicates that said first transceiver has relinquished transmitting via said shared-communications channel; and

transmitting at least one frame from a third transceiver via said shared-communications channel after said asserting of said first signal, wherein said third transceiver communicates in accordance with a second communications protocol.

2. The method of claim 1 wherein said first transceiver is IEEE 802.11 compliant, said second transceiver constitutes an access point, and said third transceiver is Bluetooth compliant.

3. The method of claim 1 further comprising:

un-asserting said polite request signal;

detecting said un-asserting of said polite request signal; and

indicating via said shared-communications channel and based on said detecting that said second transceiver send said subsequent transmissions to said first transceiver.

4. The method of claim 3:

wherein said asserting of said polite request signal also requests that said first transceiver enter a power save state;

wherein said asserting of said first signal also informs said second transceiver that said first transceiver has entered said power save state; and

wherein said un-asserting of said polite request signal also requests that said first transceiver exit said power save state.

5. The method of claim 1 further comprising:

asserting a transmitting indication signal when said third transceiver is transmitting via said shared communications channel;

un-asserting said polite request signal after said asserting of said transmitting indication signal;

un-asserting of said transmitting indication signal after said un-asserting of said polite request signal;

detecting said un-asserting of said transmitting indication signal; and

indicating via said shared-communications channel and based on said detecting that said second transceiver send said subsequent transmissions to said first transceiver.

6. The method of claim 5 further comprising transmitting at least one frame via said shared-communications channel from said third transceiver after said un-asserting of said polite request signal and before said un-asserting of said transmitting indication signal.

7. A method comprising:

notifying a first transceiver to exit a power save state, wherein said first transceiver communicates in accordance with a first communications protocol via a shared-communications channel;

asserting a transmitting indication signal that indicates that a second transceiver is transmitting via said shared communications channel in accordance with a second communications protocol; and

transmitting at least one frame from said second transceiver after said notifying and before said first transceiver has recovered from said power save state.

8. The method of claim 7 further comprising:

un-asserting said transmitting indication signal; and

transmitting at least one frame from said first transceiver via said shared communications channel after said first transceiver recovers from said power save state and after said un-asserting of said transmitting indication signal.

9. The method of claim 7 further comprising:

asserting a polite request signal that requests that said first transceiver enter said power save state; and

asserting a first signal that indicates that said first transceiver has entered said power save state.

10. The method of claim 9 wherein said notifying comprises un-asserting said polite request signal.

11. An apparatus comprising:

a first air interface subsystem for:

- (1) indicating via said shared-communications channel in accordance with a first communications protocol that a coordinating station hold subsequent transmissions to said first air interface subsystem; and
- (2) asserting a first signal that indicates that said first air interface subsystem has relinquished transmitting via said shared-communications channel; and

a second air interface subsystem for:

- (1) asserting a polite request signal that requests that said first air interface subsystem relinquish transmitting via a shared-communications channel; and
- (2) transmitting at least one frame via said shared-communications channel after said asserting of said first signal, in accordance with a second communications protocol;

wherein said first air interface subsystem and said second air interface subsystem are associated with the same host computer.

12. The apparatus of claim 11 wherein said first air interface subsystem is IEEE 802.11 compliant, said coordinating station is an access point, and said second air interface subsystem is Bluetooth compliant.

13. The apparatus of claim 11 wherein:

said second air interface subsystem is also for un-asserting said polite request signal; and

said first air interface subsystem is also for:

- (1) detecting said un-asserting of said polite request signal; and
- (2) indicating via said shared-communications channel and based on said detecting that said coordinating station send said subsequent transmissions to said first air interface subsystem.

14. The apparatus of claim 13:

wherein said asserting of said polite request signal also requests that the transceiver of said first air interface subsystem enter a power save state;

wherein said asserting of said first signal also informs said second air interface subsystem that said transceiver of said first air interface subsystem has entered said power save state; and

wherein said un-asserting of said polite request signal also requests that the transceiver of said first air interface subsystem exit said power save state.

15. The apparatus of claim 11 wherein:

said second air interface subsystem is also for:

- (1) asserting a transmitting indication signal when said second air interface subsystem is transmitting via said shared communications channel;
- (2) un-asserting said polite request signal after said asserting of said transmitting indication signal; and
- (3) un-asserting of said transmitting indication signal after said un-asserting of said polite request signal; and

said first air interface subsystem is also for:

- (1) detecting said un-asserting of said transmitting indication signal; and
- (2) indicating via said shared-communications channel and based on said detecting that said coordinating station send said subsequent transmissions to said first air interface subsystem.

16. The apparatus of claim 15 wherein said second air interface subsystem is also for transmitting at least one frame via said shared-communications channel after said un-asserting of said polite request signal and before said un-asserting of said transmitting indication signal.

17. An apparatus comprising:

a station for:

- (1) asserting a polite request signal that requests that a first air interface subsystem relinquish transmitting via a shared-communications channel;
- (2) indicating via said shared-communications channel in accordance with a first communications protocol that a coordinating station hold subsequent transmissions to said first air interface subsystem;
- (3) asserting a first signal that indicates that said first air interface subsystem has relinquished transmitting via said shared-communications channel; and
- (4) transmitting from a second air interface subsystem at least one frame via said shared-communications channel after said asserting of said first signal, in accordance with a second communications protocol; and

a host computer for providing a data block to said second air interface subsystem wherein said data block constitutes said at least one frame.

18. The apparatus of claim 17 wherein said first air interface subsystem is IEEE 802.11 compliant, said coordinating station is an access point, and said second air interface subsystem is Bluetooth compliant.

19. The apparatus of claim 17 wherein said station is also for:
un-asserting said polite request signal at said second air interface subsystem;
detecting said un-asserting of said polite request signal at said first air interface subsystem; and

indicating via said shared-communications channel and based on said detecting that said coordinating station send said subsequent transmissions to said first air interface subsystem.

20. The apparatus of claim 19:
wherein said asserting of said polite request signal also requests that the transceiver of said first air interface subsystem enter a power save state;
wherein said asserting of said first signal also informs said second air interface subsystem that said transceiver of said first air interface subsystem has entered said power save state; and
wherein said un-asserting of said polite request signal also requests that the transceiver of said first air interface subsystem exit said power save state.

21. The apparatus of claim 17 wherein said station is also for:
asserting a transmitting indication signal at said second air interface subsystem when said second air interface subsystem is transmitting via said shared communications channel;
un-asserting said polite request signal after said asserting of said transmitting indication signal;
un-asserting of said transmitting indication signal after said un-asserting of said polite request signal;
detecting said un-asserting of said transmitting indication signal at said first air interface subsystem; and

indicating via said shared-communications channel and based on said detecting that said coordinating station send said subsequent transmissions to said first air interface subsystem.

22. The apparatus of claim 21 wherein said station is also for transmitting at least one frame via said shared-communications channel using said second communications protocol after said un-asserting of said polite request signal and before said un-asserting of said transmitting indication signal.

23. An apparatus comprising:

a processor for notifying a first transceiver to exit a power save state, wherein said first transceiver communicates in accordance with a first communications protocol via a shared-communications channel; and

a first transmitter for:

- (1) asserting a transmitting indication signal that indicates that said first transmitter is transmitting via said shared communications channel in accordance with a second communications protocol; and
- (2) transmitting at least one frame after said notifying and before said first transceiver has recovered from said power save state;

wherein said first transmitter constitutes a second transceiver and said first transceiver and said second transceiver are associated with the same host computer.

24. The apparatus of claim 23 further comprising a second transmitter for transmitting at least one frame from said first transceiver via said shared communications channel after said first transceiver recovers from said power save state, wherein said second transmitter constitutes said first transceiver.